CLAIM AMENDMENTS

Amend claims: 1-8, 10-18 and new claim 19.

1. (Currently Amended) A multistage fluid separation assembly comprising:

a plurality of primary gas cooling device ~~(1,31,61)~~ each of which has a liquefied and/or solidified condensables enriched fluid outlet ~~(3,33,63)~~; and,

a secondary fluid separation vessel ~~(2,32,62)~~ having a tubular section ~~(10,30,70)~~ of which a central axis has a substantially vertical or tilted orientation, which vessel is connected to said condensables enriched fluid outlet ~~(3,33,63)~~ of said primary gas cooling devices ~~(1,31,61)~~, wherein during normal operation of the vessel ~~(2,32,62)~~ the condensables enriched fluid is induced to swirl around the central axis of the tubular section ~~(10,30,70)~~ of the vessel such that a tertiary stream ~~(17,77)~~ of liqueified and/or solidified condensables is induced by gravity and centrifugal forces to swirl in downward direction alongside the inner surface of the tubular section ~~(10,30,70)~~ of the vessel into a liquid collecting tank ~~(11,41,71)~~ at or near the bottom of the vessel for collecting a tertiary mixture of liqueified and/or solidified condensables, which tank ~~(11,41,71)~~ is provided with one or more heaters ~~(20,52,80)~~ for heating the tertiary mixture to reduce the amount of solidified condensables and with one or more outlets ~~(23,26,53,56,83,84)~~ for discharging the tertiary mixture from the tank ~~(11,41,71)~~;

~~characterized in that a plurality of secondary fluid injection conduits (3,33,63) of a plurality of primary gas cooling devices (1,31,61)~~ wherein the plurality of a liquefied and/or solidified condensables enriched fluid outlets are connected at regular circumferential intervals to the tubular section ~~(10,30,70)~~ of the secondary separation vessel ~~(2,32,62)~~, which conduits ~~(3,33,63)~~ inject in use condensables enriched fluid in an at least partially tangential direction into the interior of the secondary separation vessel ~~(2,32,62)~~.

2. (Currently Amended) The fluid separation assembly of claim 1, wherein the liquid collecting tank ~~(11,41,71)~~ comprises an upper liquid outlet ~~(26,56,83)~~ for low density liquid components and a lower liquid outlet ~~(23,53,84)~~ for high density liquid components.

3. (Currently Amended) The fluid separation assembly of claim 1 ~~or 2~~, wherein the tubular section ~~(10,30,70)~~ of the secondary separation vessel ~~(2,32,62)~~ is equipped with a

tertiary gas outlet conduit ~~(14,44,74)~~ having an inlet which is located at or near the central axis of the tubular section ~~(10,30,70)~~.

4. (Currently Amended) The fluid separation assembly of claim 3, wherein the secondary separation vessel ~~(2,32,62)~~ has a dome or disk shaped top ~~(13,43,73)~~ which is mounted on top of the tubular section ~~(10,30,70)~~ and the tertiary gas outlet conduit ~~(14,44,74)~~ is arranged substantially co-axial to the central axis of the tubular section and passes through said top.

5. (Currently Amended) The fluid separation assembly of claim 1, wherein the liquefied and/or solidified condensables enriched fluid outlet ~~(3,33,63)~~ of at least one primary gas cooling device ~~(1,31,61) is connected to a secondary fluid injection conduit (3,33,63) which~~ injects in use the condensables enriched fluid in an at least partially tangential direction into the tubular section ~~(10,30,70)~~ of the secondary separation vessel ~~(2,32,62)~~.

6. (Currently Amended) The fluid separation assembly of claim 5, wherein the central axis of the tubular section ~~(10,30,70)~~ of the secondary separation vessel ~~(2,32,62)~~ has a substantially vertical orientation and said plurality of <u>primary gas cooling device each of which has a liquefied and/or solidified condensables enriched fluid outlet</u> ~~secondary fluid injection conduits (3,33,63)~~ inject in use condensables enriched fluid ~~in~~ <u>is</u> an at least partially tangential and partially downward direction into the interior of the secondary separation vessel~~(2,32,62)~~.

7. (Currently Amended) The fluid separation assembly of claim 1, wherein the liquid collecting tank ~~(11,41,71)~~ is formed by a cup-shaped tubular lower portion of the second stage separation vessel ~~(2,32,62)~~ which is substantially co-axial to the central axis and has a larger internal width than the upper portion ~~(10,30,70)~~ of the vessel.

8. (Currently Amended) The fluid separation assembly of claim 1, wherein a vortex breaker ~~(12,42,72)~~ is arranged in the interior of the secondary separation vessel ~~(2,32,62)~~ between the lower end of the tubular section ~~(10,30,70)~~ and the liquid collecting tank ~~(11,41,71)~~.

9. (Original) The fluid separation assembly of claim 1, wherein the assembly is provided with one or more ultrasonic vibration transducers for imposing ultrasonic vibrations on one or components of the assembly to inhibit deposition of solidified condensables, such as ice, wax and/or hydrates, within the assembly.

10. (Currently Amended) The fluid separation assembly of claims 5, ~~8 and 9,~~ wherein at least the <u>primary gas cooling device each of which has a liquefied and/or solidified condensables enriched fluid outlet</u> ~~secondary fluid injection conduits~~ ~~(3,33,63)~~ and the vortex breaker ~~(12,42,72)~~ are equipped with ultrasonic vibration transducers.

11. (Currently Amended) The fluid separation assembly of claim 9 ~~or 10~~, wherein the ultrasonic vibration transducers are designed to vibrate in use one or more components of the assembly at a frequency between 20 and 200 KHz.

12. (Currently Amended) The fluid separation assembly of claim 1, wherein the liquid collecting tank ~~(11,41,71)~~ is provided with a grid of heating tubes ~~(20,52,80)~~ which are designed to heat the liquid and solid fluid mixture in the tank to a temperature of at least 15 degrees Celsius.

13. (Currently Amended) The fluid separation assembly of <u>claim 1,</u> ~~any preceding claim,~~ wherein ~~each~~ <u>at least one</u> gas cooling device comprises a primary cyclonic inertia separator ~~(1,31)~~ comprising an expansion nozzle ~~(5,35)~~ in which the fluid mixture is cooled to a temperature lower than 0 degrees Celsius by a substantially isentropic expansion and in which one or more swirl imparting vanes ~~(6,36)~~ induce the fluid to swirl into a diverging outlet section ~~(8,38)~~ which is equipped with a central primary condensables depleted fluid outlet conduit ~~(7,37)~~ and an outer secondary condensables enriched fluid outlet conduit ~~(3,33)~~.

14. (Currently Amended) The fluid separation assembly of claim 13, wherein each primary cyclonic inertia separator ~~(1,31)~~ comprises an expansion nozzle ~~(5,35) which is~~ designed to accelerate the fluid mixture within the nozzle to a supersonic speed, thereby

cooling ~~in use~~ the temperature of the fluid passing through the nozzle to a temperature lower than -20 degrees Celsius.

15. (Currently Amended) The fluid separation assembly of claim 13 ~~or 14~~, comprising a plurality of primary cyclonic inertia separators ~~(1,31)~~ of which the expansion nozzles ~~(5,35)~~ are substantially parallel and equidistant to the central axis of the tubular section ~~(10,30)~~ of the secondary separation vessel ~~(2,32)~~ and of which the secondary condensables enriched fluid outlets are connected to secondary fluid injection conduits ~~(3,33)~~ which intersect the wall of the tubular section ~~(10,30)~~ of the secondary separation vessel ~~(2,32)~~ at regular circumferential intervals and in an at least partially tangential direction, and which secondary fluid injection conduits ~~(3,33)~~ each have a length less than 4 metrers.

16. (Currently Amended) The fluid separation assembly of claim 1, wherein the gas cooling devices comprise chokes ~~(65) such as Joule Thompson valves~~.

17. (Currently Amended) A method of separating condensable components from a fluid mixture in a multistage fluid separation assembly, the method comprising:

injecting the fluid mixture into a primary gas cooling devices ~~(1,31,61)~~ in which the fluid mixture is expanded and cooled and condensable components are liquefied and/or solidified ~~and optionally separated from the gaseous components by centrifugal force~~, and in which a stream of condensables enriched fluid components is fed into a secondary fluid outlet ~~(3,33,63)~~; and,

injecting the stream of condensables enriched fluid components into a secondary fluid separation vessel ~~(2,32,62)~~ having a tubular section ~~(10,30,70)~~ of which a central axis has a substantially vertical or tilted orientation and in which the condensables enriched fluid stream is induced to swirl around the central axis of the tubular section of the vessel such that a tertiary mixture of liqueified and/or solidified condensables is induced by gravity and centrifugal forces to swirl in downward direction alongside the inner surface of the tubular section of the vessel into a liquid collecting tank ~~(11,41,71)~~ at or near the bottom of the vessel, in which tank the tertiary mixture of liqueified and/or solidified condensables is collected and heated to reduce the amount of solidified condensables and from which tank liquid and/or solidified components are discharged through one or more outlets ~~(23,26,53,56,83,84)~~;

~~characterized in that~~ wherein a plurality of secondary fluid injection conduits ~~(3,33,63)~~ of a plurality of primary gas cooling devices ~~(1,31,61)~~ are connected at regular circumferential intervals to the tubular section ~~(10,30,70)~~ of the secondary separation vessel ~~(2,32,62)~~, which conduits ~~(3,33,63)~~ inject condensables enriched fluid in an at least partially tangential direction into the interior of the secondary separation vessel ~~(2,32,62)~~.

18. (Currently Amended) The method of claim 17, wherein the fluid mixture is a natural gas stream which is cooled in gas cooling devices comprising one or more primary cyclonic inertia separators ~~(1,31)~~ to a temperature below 0 degrees Celsius thereby condensing and/or solidifying aqueous and hydrocarbon condensates and gas hydrates and the tertiary fluid mixture comprises water, ice, hydrocarbon condensates and gas hydrates and is heated in the tertiary fluid collecting tank ~~(11,41,71)~~ to a temperature above 15 degrees Celsius to reduce the amount of gas hydrates, and from which tank low density hydrocarbon condensates are discharged through an upper liquid outlet ~~(26,56,83)~~ and high density aqueous components are discharged through a lower liquid outlet ~~(23,53,84)~~.

19. (New) The method of claim 17, wherein liquefied and/or solidified components are separated from the gaseous components by centrifugal force in the primary gas cooling device.